SAP FEEDING BY THE AUSTRALIAN GECKO *GEHYRA DUBIA*. *Memoirs of the Queensland Museum 38(2):396. 1995*:- Although Australian geckos are generally opportunistic arthropod feeders (Greer, 1989), several species will also feed on plant nectar and sap. *Christinus guentheri* and *Rhacodactylus lindneri* lick nectar from blossoms (Cogger et al., 1983; King & Horner, 1993). *Gehyra australis* licks decaying, or pulpy fruit (King & Horner, 1993); and *Christinus marmoratus, Heteronotia binoei* and *Lepidodactylus lugubris* will feed in captivity on sugar-based substances (after Greer, 1989). Only two records of geckos feeding on sap are known. *Gehyra variegata* feeds on the sap of small *Acacia* shrubs in Western Australia (Dell, 1985); *Strophurus spinigerus* was seen by one of us (SKW) feeding on *Acacia* sap near Perth, WA, in spring, 1981.

On 21 March, 1995, in open forest 15km south of Yuleba (26°43'26"S, 149°19'E) SEQ, a specimen of *Gehyra dubia* was observed at approximately 1930h head-down, apparently licking sap from the trunk of a small tree, *Acacia leiocalyx leiocalyx*. Small black ants were present, so it was difficult to determine whether the gecko was feeding on these or the *Acacia* sap.

Later in the evening 2040h 1km south of the initial observation site, several specimens of *G. dubia* (2-3 per tree) were seen near the bases of trunks of small *Acacia* trees. Six specimens were feeding on sap. Two were observed for 18 minutes. The first was feeding 15cm above the ground, on a 2.7 metre high *Acacia l. leiocalyx* tree with a trunk diameter of 5cm. The gecko was head-down, licking at a 1cm 'bead' of sap on which a solid crust had formed. The gecko's tongue penetrated this outer crust to extract the softer, almost liquid, sap. The second gecko was feeding in the same way, also on sap of an *A. l. leiocalyx* tree (3m high, trunk diameter 8cm). The gecko was about 11cm from the ground, and was licking a 2cm weeping 'wound' on the *Acacia* trunk. Both geckos were collected (QMJ59560-61), killed and preserved immediately. The full duration of this behaviour was not recorded. At this site, geckos were also feeding on sap from trees of two other species - *A. conferta* and *A. decora*. Similar behaviour by *G. dubia* was observed in Barakula State Forest (26°15'S, 150°30'E) in December, 1982 (SKW), on an unidentified *Acacia* tree.

Both QMJ59560-61 are adult males, with enlarged testes. They have full stomachs. That of QMJ59560 (SVL 63.0mm) contains fragments of a large katydid (Tettigoniidae). The stomach of QMJ59561 (SVL 64.7mm) contains earwig and cockroach fragments. No recognisable *Acacia* sap is present. There are two possible explanations for the apparent absence of sap from both stomach contents: relatively small amounts of it were ingested; it is likely that sugary fluids are rapidly and completely digestible. The presence of insect remains in both gut samples shows that arthropods remain an important food source for *G. dubia* specimens, even when they feed on sap.

Sap-feeding by *Gehyra* cf. *baliola* and *Rhacodactylus australis* has been observed (SKW) recently, a specimen of the former was photographed (QMNP754) feeding on the sap of an *Acacia* sp. tree, 500m from the tip of Cape York Peninsula (10°41'S, 142°33'E). The *R. australis* was seen feeding on the sap of an unidentified rainforest tree in the Lockerbie Scrub (10°47'S, 142°28'E).

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